
Managing Locust

Module Objective:

Trainees know and explain locust plague basics



Locust Module Overview

- Locust swarms cause irrational reactions
- Locust damage: Often highly localized and does not significantly impact food security
- Donors make expensive errors in the rush to react and spend
- Lots of people & environment damaged
- That locusts are a valuable protein source & more~!
- Satellite monitoring & fungal pesticides



Module Overview continued

- Unprotected spray personnel can be harmed by pesticide exposure
- Monitoring and locust detection in desert areas is difficult and dangerous
- Donors are developing new satellite monitoring technologies
- Donors are developing biological controls like fungus to kill locusts
- Donors still need to be very careful about over-reacting to news reports of locust damage!



Locust swarms can look dramatic

- Here are swarms of desert locusts in Mauritania in 1993
- When most people see these, they become animated at the large numbers of insects in one place



Swarms are DRAMATIC!

- Here are swarms of desert locusts in Ethiopia in 1993
- What is that dark cloud on the horizon of this high-grass swamp in 1977 in Mozambique?

Danger, danger danger!



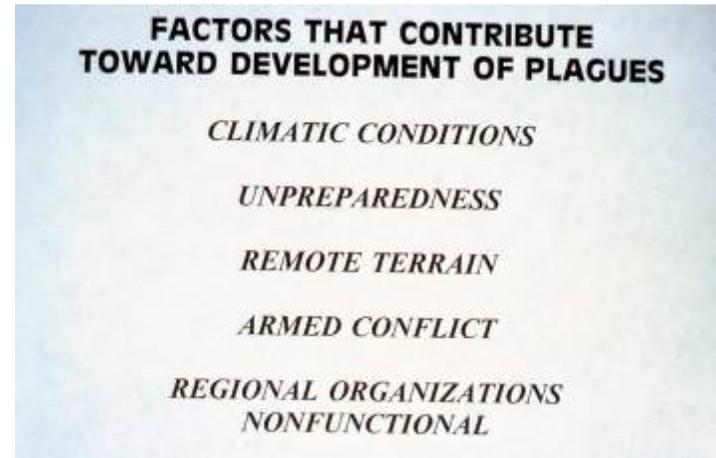
Locusts DO cause some crop loss, but how much?

- Some localized farmers are unlucky when locusts visit
- Other farmers have great crops right next door where locusts did not go



Factors that lead to panic

- Many factors contribute to formation of locust plagues
- News articles sensationalize the threat and get people excited



How do Donors Respond?

- Donors respond to all the hype with pesticides...lots of them!
- And, they are applied in expensive ways—here by helicopter



Some questions to consider...

- What happens when the wrong pesticide is shipped in large quantity to a developing country?
- What about the wrong concentration or formulation for available sprayers?
- Or if appropriate sprayers or safety equipment are not available?
- What if the pesticide arrives after the swarms have moved on?



Pesticides work, but...

- Even C-130 aircraft get into the act—these are expensive!
- What about the environment?
- Pesticides sure do a good job killing locusts



Pesticides have other impacts

- But pesticides end up killing the rest of the desert fauna too
- Locusts are considered to be ‘protein on the wing’ for food insecure people—what about people who eat them?



Used improperly, they can harm the applicator person

- What about people who apply pesticides without gloves?
- Their hands can blow up like sausage!



If sprayers are not checked for leaks, pesticides can harm

- What about people who spray with *leaking sprayers* and little protection?
- Pesticides can burn the skin, not to mention the toxic impact!



Over-donations and inappropriate donations—what happens next?

- What about leftover pesticides after the plague is finished?
- They often sit leaking into the environment!



Farmers have their own locust control mechanisms

- Farmers try to trap locust larvae in ditches before they get to the crop.
- Farmers in Madagascar try to drive locusts adults away with smoke.



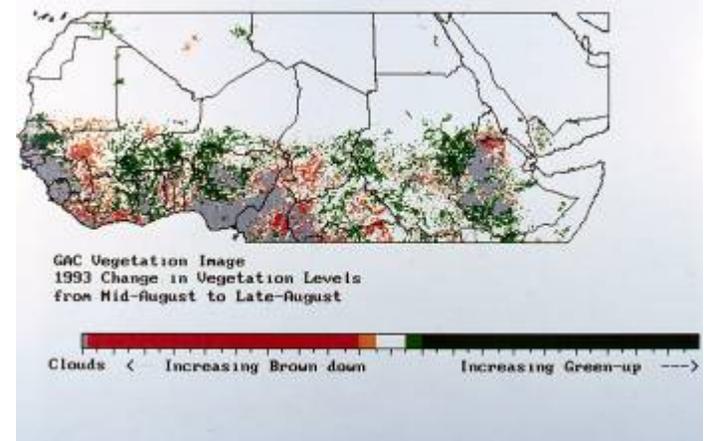
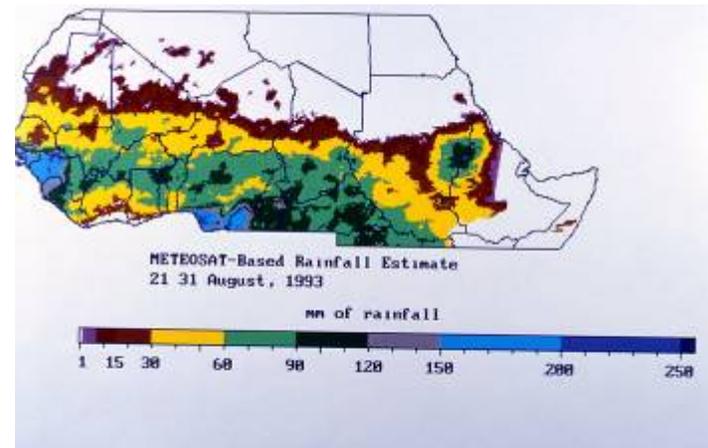
Locust survey and monitoring are effective methods of pro-action—to stop outbreaks early

- Finding locusts in the desert is very difficult, time-consuming and dangerous
- So donors and FAO are looking for ways to find locusts easier for monitoring & control



Satellite imaging is being used to pinpoint likely locust breeding areas

- Donors and FAO are mapping:
- Satellite rainfall patterns &
- Satellite green vegetation patterns



Survey teams can be sent to the exact desert places greening up

- So monitoring can be targeted only to areas that have recently greened up before driving far into the desert
- This greening-up is what locusts like, and where they are likely to be found



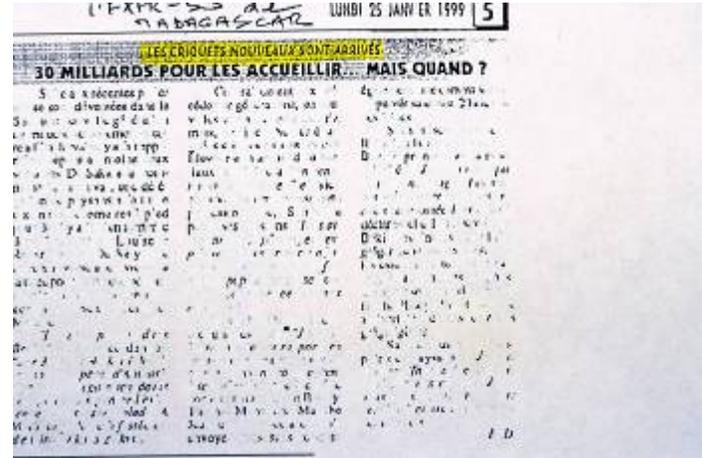
New fungal pesticides are being developed to control locusts

- For IPM, a fungus called *Metarrhizium anisopliae* kills locusts
- In Madagascar this fungus is tested against locusts & provides promise



Donors Beware!

- Donors need to be very careful about over-reacting to locust plagues
- There is a lot of misinformation out there about crop 'losses' that needs field checking & verification



Wrap Up: What you need to know

- Locust damage is often highly localized and does not significantly impact food security
- How the news & others sensationalize plagues
- How donors overreact to locust plagues
- How plagues eat up development resources
- How donors make expensive errors in the rush to react and spend



And, you should know that:

- Locusts are a valuable protein source
- Lots of environment can be damaged
- Unprotected spray personnel can be harmed by pesticide exposure
- Monitoring and locust detection in desert areas is difficult and dangerous
- Donors are developing new monitoring technologies and fungus to kill locusts



But mostly...

- Donors still need to be very careful about over-reacting to news reports of locust plague damage!



You should be able to:

- Write requirements for honest duplicatable crop loss and market dynamics studies into the **RFP** for locust plague management
- In the **Proposal**, recognize the groups that understand locust plague, crop production and people response dynamics well so as to save resources and reduce risk of errors
- Critique an **EA or IEE/PERSUAP** for all of these emergency reaction issues



And, you should be able to:

- **Confidently Monitor** projects in the field, and be able to ask questions about real and inflated crop loss estimates and smoke out the myriad self interests that take advantage of chaotic situations surrounding locust plagues.



Manage Crop Losses from Locusts: Food Security Shipments

- Shipments of wheat flour, beans, and chickpeas
- Awaiting shipment by UN World Food Program to people in need



Locust Plague Wrap Up

- Locust damage is highly localized
- Does not significantly impact national food security
- Donors make expensive errors in the rush to react and spend
- Need very good crop loss verification
- If spraying for crop protection, reduce risks to people & environment
- Need targeted food security response



Group Exercise

- Complete the short quiz
- Discuss results with team
- Discuss team findings with others

